

Like other complex Superfund sites, the Lower Duwamish Waterway (LDW) Superfund site is a multi-phased process. Since LDW became a Superfund site in 2001, five Early Action Area (EAA) cleanups have focused on sediment hotspots (areas of highly contaminated mud on the river bottom). The EAAs removed an estimated 50% of the PCB-contaminated sediment. In 2014, EPA completed the study of the overall site and published a final cleanup plan (Record of Decision) for remaining contaminated sediments.

The Washington Department of Ecology is responsible for controlling sources of contamination to the LDW site. Ecology and EPA will continue coordinating their activities to ensure that sediment cleanup work does not become recontaminated to a level requiring additional cleanup.

This year, waterway users are being surveyed to make sure that changes in land use are factored into the cleanup design. In 2017 and 2018, testing of sediment, water, and seafood will be done to establish new baseline conditions. Over the coming years, EPA expects PRPs (parties potentially responsible for cleanup costs) to design and construct the remaining sediment cleanup and to monitor and maintain the site over time. As cleanup and source control continue, testing will be repeated to assess progress towards long-term cleanup goals.

For more information about the Record of Decision and next steps, please contact: **Elly Hale •** 206-553-1215 • hale.elly@epa.gov

During this and all phases of the cleanup, we will continue to work with and involve communities in the cleanup. One example of this is the formation of the Duwamish Roundtable. An organizing committee met in winter and spring of 2017 to plan the Roundtable. We will begin to recruit members to the Roundtable later in 2017. If you are interested in participating in the Roundtable, please contact:

Julie Congdon • 206-553-2752 • congdon.julie@epa.gov

Come talk to us!

Coffee Chat

Monday, October 23, 2017

Drop in any time between 4 and 7 p.m. All City Coffee, 1205 S Vale St, Seattle, WA 98108

Talk informally with project staff. Give your feedback on the cleanup.

Contact: Julie Congdon, US EPA • 206-553-2752 • 800-424-4372 ext. 2752 •

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EPA's Recent Cleanup Work in the Waterway Acronyms Lower Duwamish Waterway RCRA = Resource Conservation & Recovery Act **CERCLA** = Comprehensive Environmental Response, Early Action Area (EAA) Compensation, and Liability Act, best known as Superfund **EAA** = Early Action Area: One of five areas where early cleanup was needed to address high levels of sediment contamination. Two EAAs (Duwamish Diagonal Combined Sewer Overflow [CSO] and the Norfolk CSO) were capped early on as part of a settlement with other federal agencies. 10 East Waterway Downstream from the Lower Duwamish Waterway, the East Waterway is part of the Harbor Island Superfund site. The sediment of the East Waterway is contaminated with pollutants including PCBs, arsenic, carcinogenic PAHs, tributyltin and mercury. EPA's feasibility study and proposed preferred cleanup 1 Lockheed West Seattle option will be available for public comment in 2018. Outside the mouth of the Lower Duwamish For more information on this site, please contact Ravi Sanga Waterway, the Lockheed West Seattle Superfund site is also being cleaned up. The cleanup will remove approximately 100,000 cubic yards of contaminated sediment from 15 acres and will place 6 inches of clean sand across the 40-acre site. In addition, debris will be removed from the shoreline and the sediment and all the pilings in the shipway will be removed. Fish advisories will remain 9 Rainier Commons EPA is overseeing Rainier Commons LLC work to remove the after the cleanup and are managed by the WA Department of Health. Cleanup is expected PCB-laden paint from the outside walls of the buildings at the former Rainier Brewery. Paint removal started in 2014 and will continue in phases. Special methods and monitoring are used to to begin in 2018 and will be coordinated with tribal fishing to respect tribal treaties. Lockheed ensure that PCBs are not getting in the air or in storm drains as a Martin Company is conducting the work. result of paint removal. For more information, please contact Piper For more information on this site, please contact Michelle Peterson at 206.553.4951 Mullin at 206,553,1616 **Duwamish** 2 Slip 4 Cleanup of Contaminated Land in the **Diagonal CSO** In 2012, the City of Seattle completed Slip 4 **Duwamish: Ecology's Source Control Work** work to dredge and remove PCB-contaminated completed sediment and to place a cap of clean sediment. Source control is crucial to the success of EPA's in-waterway Long term monitoring at the site includes cleanup. When the sources of pollution are sufficiently under control, cleanup of the river sediments can start. Ecology leads periodic visual inspections, sampling, and depth surveys to check for erosion. The results of 2017 monitoring, which includes sediment sampling, will be reported later this summer. the effort to control sources of contamination from the land area surrounding the Lower Duwamish Waterway (LDW) Superfund Site. Ecology is managing 21 cleanup sites through its formal cleanup process. Many other sites are being cleaned up under Ecology's Voluntary Cleanup Program. These cleanups are part of source control – stopping or reducing contaminant sources For more information, please contact Elly Hale at 206.553.1215 before they reach the river. Source control also includes many other actions, such as business inspections, controlling stormwater runoff, coordination between agencies, and education. For more information on Ecology's work in the LDW, please 3 Boeing Plant 2 EAA visit: http://www.ecy.wa.gov/programs/tcp/sites_brochure/lower_duwamish/lower_duwamish_hp.html PCBs are the primary contaminant at Plant 2. Cleanup of contaminated sediments was completed by Boeing in 2015, while cleanup of upland parts of the site is in progress. Boeing continues to monitor the quality of the mud, or sediment, at the site. In the upland area of the facility along the river. Boeing has been sampling to see how widespread the PCB and other contamination 8 Boeing Electronics is. Boeing has also completed a number of interim soil Manufacturing Facility (EMF) cleanups to help control the contamination. EPA will provide public notice and an opportunity to comment on The groundwater beneath the site was contaminated with a proposed final cleanup plan, known as a Statement of Basis, for the upland area of the site later in 2017. trichloroethene (TCE), which breaks down to vinyl chloride and other chlorinated volatile organic compounds (VOCs). Groundwater treatment pilot testing has been ongoing since 1997. For more information on this site, please contact Dave Bartus at 206.553.2804 EPA proposed continuing treatment of groundwater to destroy the VOCs and will issue a cleanup plan in an Action Memorandum. For more information on this site, please contact Laura Castrilli at 206.553.4323 4 Jorgensen Forge 24-inch Pipe This underground pipe to an old outfall released PCBs. The pipe and contaminated dirt below the pipe were excavated in phases, in 2015 and 2017. Land use restrictions will address remaining contamination left in place. For more information on this site, please contact Ravi Sanga at 206.553.4092 5 Earle M. Jorgensen Forge EAA While Ecology is overseeing upland cleanup studies, EPA has been overseeing the early action area sediment cleanup. Some of the PCB-contaminated sediments and river bank dirt was removed in 2014. However, samples collected after the excavation found that some sediments were still contaminated. EPA is requiring EMJ to evaluate additional cleanup work to address this sediment contamination. This evaluation will be described in a Supplemental Engineering Evaluation and Cost Analysis, which will evaluate ways to clean up the remaining PCB contamination. For more information on this site, please contact Joe Wallace at 206.553.4470 6 Terminal 117 EAA The uplands and off-shore sediments of Terminal 117 (T-117) and some streets and yards near the terminal were primarily contaminated with PCBs. EPA issued a cleanup plan for the T-117 site in 2010. The Port of Seattle and City of Seattle did the cleanup work, which replaced soil and sediment and updated the storm drainage system, from 2012 to 2015. Final site modifications, including permanent stormwater controls and regrading the Dallas and Donovan streets, will be completed in 2017. The Port is developing habitat restoration plans. For more information, please contact Piper Peterson at 206.553.4951 Carbon Amendment Study 7 Rhone Poulenc The Carbon Amendment Pilot Study is testing how adding activated carbon (material often used in filters because it naturally The eastern half of the site has been cleaned up and is now owned by the Museum of Flight. Norfolk CSO Toluene, metals, and high pH affect groundwater, soil, and sediments throughout the western half of the site, known as the West Parcel. A groundwater pump-and-treat system with a barrier wall traps certain kinds of contamination) to the sand used for completed sediment cleanup can lower contamination levels in fish and crabs faster. Small comparison areas built in the waterway last winter currently contains much of the soil and groundwater contamination at the West Parcel. EPA is also working with the responsible parties to begin an onsite study to inject carbon dioxide into the 2017 will be monitored for three years. According to EPA's cleanup groundwater to see if it will lower pH at the site, and to conduct additional groundwater sampling plan for sediments, if the technology works well, activated carbon to better understand the groundwater contamination. Information from this study and sampling may be used to enhance natural recovery in less contaminated areas along with prior investigations will be used to help determine alternatives (known as Corrective Measures) for cleaning up the West Parcel. For more information, please contact Elly Hale at 206.553.1215 For more information on this site, please contact Janette Knittel at 206.553.0483

What about fishing on the Duwamish?

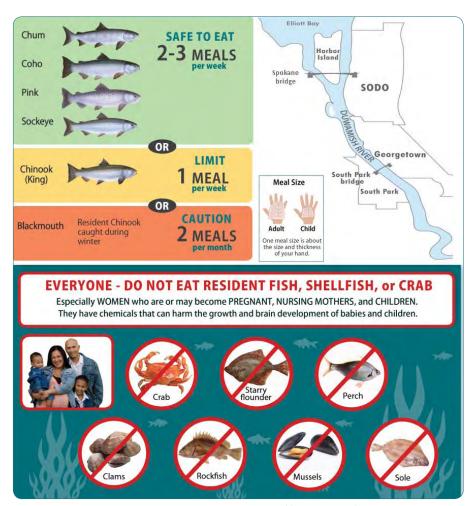
Many people enjoy fishing on the Duwamish River. However, the resident seafood that live in the river year-round are not safe to eat. To get a better idea of who fishes on the river and their fishing practices, EPA completed the Fishers Study in 2016. Some of the key findings from the Study were:

- Fishing is an important activity for the wellbeing of fishers and creates a sense of community.
- Fishers on the Duwamish are very diverse, represented more than 20 ethnic/language groups.
- Fishers continue to consume and share their catch, including resident fish, crab and shellfish.
- The advisory information is hard to understand, and signs are not entirely effective in promoting safe fish
 consumption.
- Promoting healthy fish consumption must connect with the local fishing culture. Rather than asking "why don't
 fishers follow the advisory?" the question should be reframed as "how do we meet the needs of the fishers to
 promote healthy fish consumption?"

In January 2017, EPA entered into a Cooperative Agreement (CA) with Public Health Seattle-King County to establish a community-based Healthy Seafood Consumption Institutional Control (IC) Program for the LDW Superfund Site. The CA establishes a community-based participatory process to develop culturally-appropriate IC tools that can be implemented throughout the cleanup of the LDW Superfund Site. The program will promote healthy seafood consumption before, during, and after the cleanup.

For more information about the Fishers Study and the next steps, please contact:

- **► US EPA**: Rebecca Chu (206) 553-1774 chu.rebecca@epa.gov
- Public Health Seattle & King County: Sinang Lee (206) 263-1192 sinang.lee@kingcounty.gov



For the text of this poster, visit http://go.usa.gov/x9GXw

What can I do?

- 1. The best way to avoid being exposed to contamination in the river is to not eat the resident fish that have the contaminants in their body. It is safe to eat salmon that come to the river because they visit the river for such a short time.
- 2. Help keep pollutants from getting into the river. Don't put oil and other pollutants into storm drains. Report spills.
- 3. Help restore habitat, plant trees, and cleanup up trash along the river at parks and on the shoreline by participating in Duwamish Alive and other volunteer events. For more information, please visit http://www.duwamishalive.org

To learn more about how to get involved in the cleanup, please contact **Julie Congdon** • 206-553-2752

For more information

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Julie Congdon, **Community Involvement Coordinator**, U.S. Environmental Protection Agency, Region 10 206-553-2752 • congdon.julie@epa.gov

For information on <u>US Environmental Protection Agency's work</u> in the Lower Duwamish Waterway, please visit: https://yosemite.epa.gov/r10/cleanup.nsf/sites/lduwamish

To receive **regular updates** on EPA's cleanup work, please contact Julie Congdon (congdon.julie@epa.gov) to subscribe to the **Duwamish cleanup listserv**.

Follow us on Facebook to stay informed about our cleanup activities and our programs related to the Duwamish area: facebook.com/epaduwamish

For information on <u>Washington Department of Ecology's work</u> in the Lower Duwamish Waterway, please visit: http://www.ecy.wa.gov/programs/tcp/sites_brochure/lower_duwamish/lower_duwamish_hp.html

To receive regular updates on Ecology's cleanup work, you can subscribe to its <a href="mailto:emailto

For information on the <u>Community Advisory Group</u>, please contact the Duwamish River Cleanup Coalition Technical Advisory Group (DRCC/TAG) at <u>duwamishcleanup.org</u> or <u>contact@duwamishcleanup.org</u> or 206-954-0218.

EPA provides reasonable accommodation to individuals with disabilities where appropriate. If you need a reasonable accommodation, such as requiring information in a certain format (Braille, large print), please notify Julie Congdon, listed above.

■ TDD or TTY users, please call 1-800-877-8339 and give the operator Julie's phone number.